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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,850	07/08/2003	Christopher Jones	1391-41700	9134
23505	7590	06/17/2004	EXAMINER	
CONLEY ROSE, P.C. P. O. BOX 3267 HOUSTON, TX 77253-3267			FITZGERALD, JOHN P	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Applicati n N .	Applicant(s)	
	10/614,850	JONES ET AL. <span style="float: right;">CK</span>	
	Examin r	Art Unit	
	John P Fitzgerald	2856	

**-- The MAILING DATE of this c mmunicati n app ars on the c ver she t with the corresp ndence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,8-14 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 5-7 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Pri rity under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/04/03</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 10, 11, 13 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. Striegler discloses a method for measuring the infiltration of a coring fluid into a core sample taken from a formation including the steps of providing a coring fluid containing an oil having a different hydrocarbon analysis (hydrocarbons with eight to thirty-five carbon atoms) than that of the formation oil/fluid; utilizing the coring fluid in conjunction with a coring means (i.e. coring barrel or sidewall coring device) to generate a core sample; determining/measuring the concentration of coring fluid that has infiltrated the core sample via chromatographic or mass spectrophotometry methods and performing a relative quantity/percentage comparison analysis of the two different hydrocarbon materials in the formation oil, coring/drilling fluid and to that of the sample oil which is taken from the core sample by displacing the sample oil via centrifuging (as recited in claims 4 and 13) the core sample or by displacing the sample oil by solvent extraction or fluid displacement of the core (as recited in claims 10 and 19). See Fig. 1 and Tables 1 and 2 in col. 4. However, Striegler fails to disclose the employment of a drilling fluid containing cesium and performing the comparison analysis based on the concentration of cesium infiltrated into the core sample. US 6,423,802 to Miller et al. teach the use of cesium based

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coring/drilling fluids (note: cesium based includes cesium salts, formates, formic acids such as  $\text{CsCO}_2\text{H}$ ). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a coring/drilling fluid containing cesium, and subsequently perform the relative concentration/quantity analysis disclosed by Striegler to determine the degree of infiltration of the coring/drilling fluid containing cesium into the core sample, since cesium based coring/drilling fluids provide a high temperature viscosity as well as suitable density for drilling/coring (Miller et al. col. 2, lines 1-9).

3. Claims 3 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and further in view of Applicant's disclosed Prior Art document "*A Beginners Guide to ICP-MS Part I / Spectroscopy Tutorial*" by Thomas. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously, including the employment of a mass spectrometer. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. do not expressly disclose the employment of a ICP-MS spectrometer to determine the concentration of cesium present in the core sample. Thomas teaches that an ICP-MS is a class of spectrometer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an ICP-MS spectrometer to analyze the concentration of a cesium constituent, as taught by Thomas, thus providing a rapid multielement capabilities combined with superb detection limits (Thomas, page 1, col. 1). Furthermore, it is considered an obvious matter of design choice to employ an ICP-MS to determine the relative concentrations of elements with a core sample, since applicant has not disclosed that an ICP-MS spectrometer solves any stated problem or is for any particular

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purpose and it appears that the invention would perform equally well with any type of mass spectrometer.

4. Claims 8 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and further in view of US 6,177,396 to Clapperton et al. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously. Striegler further discloses that drilling/coring fluids are comprised of various elements, chemicals and solids (i.e. weighting agents) to control the formation pressures. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. do not expressly disclose the use of cesium as a weight agent in coring fluid. Clapperton et al. teach that various salts are employed as weighting agents, specifically, cesium, sodium and calcium salts have been tested and used as drilling/coring fluids due to their relatively high density (Clapperton et al.: col. 14, line 61 to col. 15, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a cesium salt as a weighting agent within drilling/coring fluids, or any type of suitable salt compound as a weighting agent, and is considered to be an obvious design choice well within the purview of one of ordinary skill in the art.

5. Claims 9 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and further in view of US 6,283,228 to Collee et al. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously. US 4,174,629 to Striegler and US 6,423,802 to

Miller et al. do not expressly disclose a method for measuring the infiltration of a coring fluid into a core sample further including a device for reducing the amount of coring fluid that infiltrates the core sample. Collee et al. teach a coring method for protecting the integrity of a core sample obtained with a drilling/coring fluid and further encapsulating the core sample with an encapsulating material that is separate from the drilling/coring fluid, as well as other methods of reducing infiltration into the core sample such as pressure coring and sponge coring. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a device for reducing the amount of coring fluid that infiltrates the core sample, as taught by Collee et al., modifying the method step of obtaining a core sample disclosed by Striegler and Miller et al., for protecting the chemical integrity of the core sample during transport from the subterranean formation to the surface, which aids in the subsequent chemical analysis of the core sample.

#### ***Allowable Subject Matter***

6. Claims 5, 6, 7, 14, 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Davis et al., Vinegar et al., Freeman et al., Ebenhack et al., Sinnokrot, Boone, Davis et al., Hunt et al., Coles et al. and Gilliland et al. all teach various related aspects to the claimed invention. Aston and Bakke et al. teach the employment of cesium in drilling/coring fluids.


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JF

06/04/2004



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